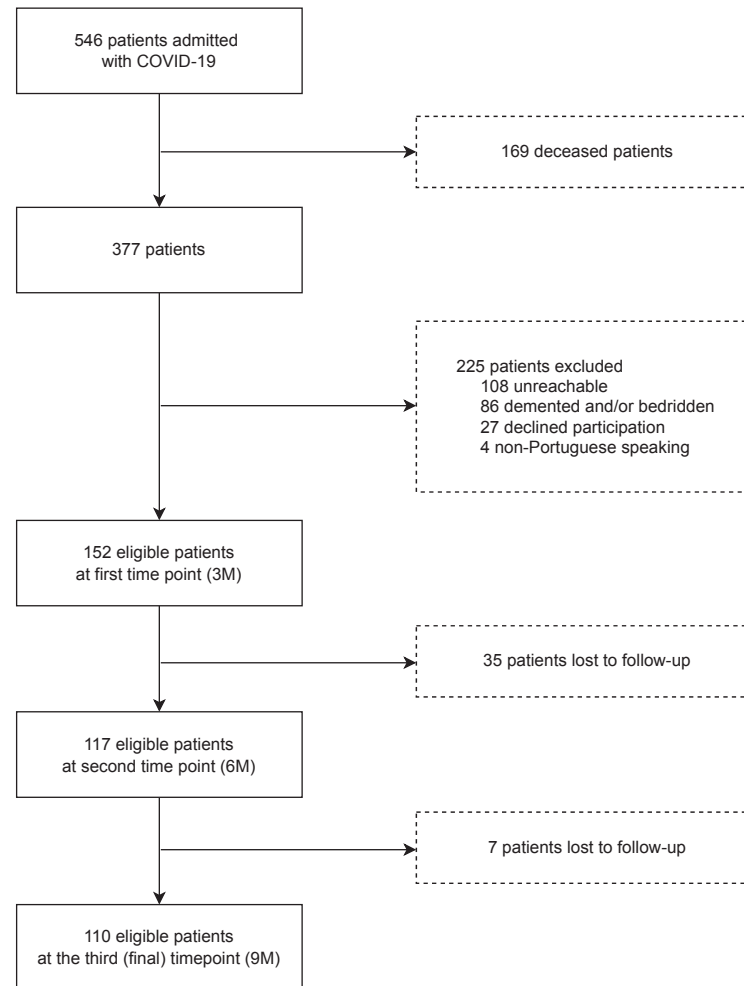


Appendix 3

Supplementary Figure 1



Supplementary figure 1. Patients' selection process. 3M, three months; 6M, six months; 9M, nine months.

**Supplementary table 1.** Demographic and clinical characteristics of enrolled participants at all three time points.

	Total /Three months N = 152	Six months N = 117	Nine months N = 110
<b>Demographics</b>			
Male sex	86 (56.6)	63 (53.9)	59 (53.6)
Age (years)	61 (73 - 52)	59 (73 - 51)	60 (72 - 51)
CFS			
1	15 (9.9)	11 (9.4)	11 (10.0)
2	61 (40.1)	50 (42.7)	49 (44.6)
3	53 (34.9)	37 (31.6)	33 (30.0)
4	19 (12.5)	17 (14.5)	15 (13.6)
5	4 (2.6)	2 (1.7)	2 (1.8)
Return to previous CFS after discharge	105 (69.1)	85 (72.7)	85 (77.3)
<b>Comorbid conditions</b>			
Cardiovascular disease	92 (60.5)	70 (59.8)	65 (59.1)
High blood pressure	88 (57.9)	68 (58.1)	63 (57.3)
Heart failure	19 (12.5)	13 (11.1)	12 (10.9)
Ischaemic heart disease	15 (9.9)	9 (7.7)	9 (8.2)
Dyslipidaemia	70 (46.1)	53 (45.3)	50 (45.5)
Cerebrovascular disease	10 (6.6)	7 (5.9)	7 (6.4)
Obesity	57 (37.8)	51 (43.9)	47 (43.1)
Diabetes mellitus	50 (32.9)	39 (33.3)	38 (34.6)
Lung disease	40 (26.3)	32 (27.4)	31 (28.2)
Depression/anxiety	30 (19.7)	25 (21.4)	22 (20.0)
Chronic kidney disease	25 (16.5)	16 (13.7)	15 (13.6)
Osteoarthritis	24 (15.8)	18 (15.4)	15 (13.6)
Hypothyroidism	11 (7.2)	10 (8.9)	9 (8.2)
Chronic liver disease	9 (5.9)	8 (6.8)	8 (7.3)
Autoimmune disease	8 (5.3)	6 (5.1)	6 (5.5)
Active solid cancer	7 (4.6)	4 (3.4)	3 (2.7)
Active hematologic cancer	7 (4.6)	7 (5.9)	7 (6.4)
HIV	2 (1.3)	1 (0.9)	1 (0.9)
<b>Clinical manifestations</b>			
Fever	109 (71.7)	83 (70.9)	78 (70.9)
Cough	99 (65.1)	75 (64.1)	72 (65.5)
Dyspnoea	90 (59.2)	76 (64.9)	71 (64.6)
Fatigue	75 (49.3)	57 (48.7)	55 (50.0)
Myalgia/arthritis	63 (41.5)	50 (42.7)	47 (42.7)
Chest pain	31 (20.4)	22 (18.8)	20 (18.2)
Diarrhoea	30 (19.7)	22 (18.8)	21 (19.1)
Headache	27 (17.8)	21 (17.9)	20 (18.2)
Nausea/vomiting	18 (11.8)	8 (6.8)	8 (7.3)
Dysgeusia	11 (7.2)	7 (5.9)	6 (5.5)
Anorexia	9 (5.9)	5 (4.3)	5 (4.6)
Anosmia	7 (4.6)	5 (4.3)	5 (4.6)
Odynophagia	6 (3.9)	3 (2.6)	3 (2.7)
Skin rash	1 (0.7)	1 (0.9)	1 (0.9)
<b>Hospitalization and outcomes</b>			
Time since disease onset to hospital admission (days)	8 (10 - 5)	8 (10 - 5)	8 (10 - 5)
Hospital length of stay (days)	12 (18.5 - 8)	12 (17 - 8)	12 (19 - 8)
ICU admission	36 (23.7)	28 (23.9)	27 (24.6)
ICU length of stay (days)	8.5 (13 - 5.5)	9 (13 - 5.5)	8 (13 - 5)
High flow nasal cannula	41 (26.9)	33 (28.2)	32 (29.1)
Non-invasive ventilation	16 (10.5)	15 (12.8)	14 (12.7)
Endotracheal intubation	18 (11.8)	13 (11.1)	12 (10.9)
Ventilatory support	55 (36.2)	44 (37.6)	42 (38.2)
Severe disease <sup>a</sup>	57 (37.5)	46 (39.3)	44 (40.0)
WHO ordinal scale	5 (5 - 5)	5 (5 - 5)	5 (5 - 5)
<b>Long-COVID-19</b>	101 (66.5)	73 (62.4)	59 (53.6)

Data are shown as number (%) for categorical variables and median  $\pm$  interquartile range for continuous variables. There are no missing values. <sup>a</sup> Severe disease was defined as ICU admission rate and/or need for any kind of ventilatory support (invasive or non-invasive) during the in-hospital stay. See **Supplementary Data 2** for further detail on comorbid conditions and outcomes' definitions. CFS, clinical frailty scale; HIV, human immunodeficiency virus; ICU, intensive care unit; WHO, World Health Organization.

**Supplementary table 2.** Comparison of clinical and demographic characteristics between patients with and without long-COVID-19 after hospital discharge.

	Three months			Six months			Nine months		
	Symptomatic N = 101	No symptomatic N = 51	<i>p-value</i>	Symptomatic N = 73	No symptomatic N = 44	<i>p-value</i>	Symptomatic N = 59	No symptomatic N = 51	<i>p-value</i>
<b>Demographics</b>									
Male sex	52 (51.5)	34 (66.7)	0.075	35 (47.9)	28 (63.6)	0.099	27 (45.8)	32 (62.8)	0.075
Age	61 (72 - 53)	61 (74 -1)	0.788	59 (72 -52)	59 (74 - 49.5)	0.982	58 (71 -51)	59 (73 - 48)	0.955
Clinical frailty scale			0.669			0.919			0.527
1	11 (10.9)	4 (7.8)		7 (9.6)	4 (9.1)		6 (10.2)	5 (9.8)	
2	40 (39.6)	21 (41.2)		32 (43.8)	18 (40.9)		27 (45.8)	22 (43.1)	
3	37 (36.6)	16 (31.4)		24 (32.9)	13 (29.6)		20 (33.9)	13 (25.5)	
4	10 (9.9)	9 (17.7)		9 (12.3)	8 (18.2)		5 (8.5)	10 (19.6)	
5	3 (2.9)	1 (1.9)		1 (1.4)	1 (2.3)		1 (1.7)	1 (1.9)	
Return do previous CFS after discharge	61 (60.4)	44 (86.3)	<b>0.001</b>	47 (64.4)	38 (86.4)	<b>0.010</b>	39 (66.1)	46 (90.2)	<b>0.003</b>
<b>Comorbid conditions</b>									
Total number of previous diseases	4 (5 - 2)	4 (5 - 2)	0.961	4 (5 - 2)	4 (5.5 - 2)	0.505	3 (5 - 2)	4 (5 - 2)	0.961
Cardiovascular disease	63 (62.4)	29 (56.9)	0.511	43 (58.9)	27 (61.4)	0.793	33 (55.9)	32 (62.8)	0.469
High blood pressure	59 (58.4)	29 (56.9)	0.855	41 (56.2)	27 (61.4)	0.581	32 (54.2)	31 (60.8)	0.489
Heart failure	10 (9.9)	9 (17.7)	0.198	5 (6.9)	8 (18.2)	0.073	2 (3.4)	10 (19.6)	<b>0.011</b>
Ischaemic heart disease	10 (9.9)	5 (9.8)	1.000	5 (6.9)	4 (9.1)	0.727	4 (6.8)	5 (9.8)	0.731
Dyslipidaemia	46 (45.5)	24 (47.1)	0.860	34 (46.6)	19 (43.2)	0.721	26 (44.1)	24 (47.1)	0.753
Cerebrovascular disease	6 (5.9)	4 (7.8)	0.733	5 (6.9)	2 (4.6)	0.709	4 (6.8)	3 (5.9)	1.000
Obesity	38 (38.0)	19 (37.3)	0.929	30 (41.7)	21 (47.7)	0.523	25 (43.1)	22 (43.1)	0.997
Diabetes mellitus	30 (29.7)	20 (39.2)	0.239	21 (28.8)	18 (40.9)	0.177	18 (30.5)	20 (39.2)	0.338
Lung disease	29 (28.7)	11 (21.6)	0.345	22 (30.1)	10 (22.7)	0.384	20 (33.9)	11 (21.6)	0.152
Depression/anxiety	21 (20.8)	9 (17.7)	0.646	15 (20.6)	10 (22.7)	0.781	11 (18.6)	11 (21.6)	0.702
Chronic kidney disease	12 (11.9)	13 (25.5)	<b>0.033</b>	5 (6.9)	11 (25.0)	<b>0.010</b>	4 (6.8)	11 (21.6)	<b>0.024</b>
Osteoarthritis	18 (17.8)	6 (11.8)	0.334	12 (16.4)	6 (13.6)	0.684	10 (16.9)	5 (9.8)	0.404
Hypothyroidism	10 (9.9)	1 (1.9)	0.100	8 (10.9)	2 (4.6)	0.316	8 (13.6)	1 (1.9)	<b>0.036</b>
Chronic liver disease	7 (6.9)	2 (3.9)	0.718	7 (9.6)	1 (2.3)	0.0255	5 (8.5)	3 (5.9)	0.722
Autoimmune disease	7 (6.9)	1 (1.9)	0.269	5 (6.9)	1 (2.3)	0.407	5 (8.5)	1 (1.9)	0.213
Active solid cancer	3 (2.9)	4 (7.8)	0.225	2 (2.7)	2 (4.6)	0.631	2 (3.4)	1 (1.9)	1.000
Active hematologic cancer	5 (4.9)	2 (3.9)	1.000	5 (6.9)	2 (4.6)	0.709	5 (8.5)	2 (3.9)	0.447
HIV	1 (0.9)	1 (1.9)	1.000	0	1 (2.3)	-	0	1 (1.9)	-
<b>Clinical manifestations</b>									

Total number of symptoms at presentation	4 (5 - 3)	3 (4 - 2)	<b>0.034</b>	4 (5 - 3)	3 (4 - 2)	0.117	4 (5 - 3)	3 (4 - 3)	0.161
Fever	76 (75.3)	33 (64.7)	0.173	83 (70.9)	27 (61.4)	0.077	45 (76.3)	33 (64.7)	0.183
Cough	71 (70.3)	28 (54.9)	0.060	50 (68.5)	25 (56.8)	0.202	42 (71.2)	30 (58.8)	0.174
Dyspnoea	63 (62.4)	27 (52.9)	0.264	48 (65.8)	28 (63.6)	0.816	41 (69.5)	30 (58.8)	0.243
Fatigue	53 (52.5)	22 (43.1)	0.277	37 (50.7)	20 (45.5)	0.584	28 (47.5)	27 (52.9)	0.566
Myalgia/arthralgia	47 (46.5)	16 (31.4)	0.073	34 (46.6)	16 (36.4)	0.279	26 (44.1)	21 (41.2)	0.760
Chest pain	22 (21.8)	9 (17.7)	0.550	12 (16.4)	10 (22.7)	0.399	11 (18.6)	9 (17.7)	0.892
Diarrhoea	19 (18.8)	11 (21.6)	0.687	15 (20.6)	7 (15.9)	0.534	13 (22.0)	8 (15.7)	0.398
Headache	20 (19.8)	7 (13.7)	0.355	14 (19.2)	7 (15.9)	0.655	12 (20.3)	8 (15.7)	0.528
Nausea/vomiting	12 (11.9)	6 (11.8)	1.000	4 (5.5)	4 (9.1)	0.472	3 (5.1)	5 (9.8)	0.468
Dysgeusia	6 (5.9)	5 (9.8)	0.508	4 (5.5)	3 (6.8)	1.000	3 (5.1)	3 (5.9)	1.000
Anorexia	2 (1.9)	7 (12.7)	<b>0.007</b>	2 (2.7)	3 (6.8)	0.363	1 (1.7)	4 (7.8)	0.181
Anosmia	3 (2.9)	4 (7.8)	0.225	3 (4.1)	2 (4.6)	1.000	3 (5.1)	2 (3.9)	1.000
Odynophagia	4 (3.9)	2 (3.9)	1.000	2 (2.7)	1 (2.3)	1.000	2 (3.4)	1 (1.9)	1.000
Skin rash	1 (0.9)	0	-	1 (1.4)	0	-	1 (1.7)	0	-
<b>Hospitalization and outcomes</b>									
Time since disease onset and hospital admission (days)	8 (10 - 6)	7 (9 - 4)	<b>0.026</b>	8.5 (10 - 6)	7 (9 - 3)	<b>0.011</b>	8.5 (10 - 6)	7 (9 - 3)	<b>0.012</b>
Hospital length of stay (days)	12 (20 - 7)	12 (17 - 8)	0.168	12 (22 - 8)	11 (16 - 8)	0.573	12 (22 - 8)	12 (16 - 8)	0.895
ICU admission	26 (25.7)	10 (19.6)	0.401	20 (27.4)	8 (18.2)	0.258	17 (28.8)	10 (19.6)	0.263
ICU length of stay (days)	9 (14 - 6)	6.5 (9 - 4)	0.347	9 (16 - 6.5)	6.5 (11 - 3.5)	0.240	9 (13 - 7)	6.5 (13 - 4)	0.326
High flow nasal cannula	32 (31.7)	9 (17.7)	0.066	25 (34.3)	8 (18.2)	0.061	20 (33.9)	12 (23.5)	0.232
Non-invasive ventilation	11 (10.9)	5 (9.8)	1.000	10 (13.7)	5 (11.4)	0.783	10 (16.9)	4 (7.8)	0.251
Endotracheal intubation	14 (13.9)	4 (7.8)	0.278	10 (13.7)	3 (6.8)	0.365	8 (13.6)	4 (7.8)	0.377
Ventilatory support	41 (40.6)	14 (27.5)	0.111	32 (43.8)	12 (27.3)	0.073	27 (45.8)	15 (29.4)	0.078
Severe disease <sup>a</sup>	42 (41.6)	15 (29.4)	0.143	33 (45.2)	13 (29.6)	0.093	28 (47.5)	16 (31.4)	0.086
WHO ordinal scale	5 (5 - 5)	5 (5 - 5)	0.093	5 (5 - 5)	5 (5 - 5)	0.075	5 (5 - 5)	5 (5 - 5)	0.222

Data are shown as number (%) for categorical variables and median  $\pm$  interquartile range for continuous variables. There are no missing values. <sup>a</sup> Severe disease was defined as ICU admission rate and/or need for any kind of ventilatory support (invasive or non-invasive) during the in-hospital stay. See **Supplementary Data 2** for further detail on comorbid conditions and outcomes' definitions. CFS, clinical frailty scale; HIV, human immunodeficiency virus; ICU, intensive care unit; WHO, World Health Organization.

**Supplementary table 3.** Comparison of clinical and demographic characteristics between patients with and without **mobility** impairment after hospital discharge.

	Three months			Six months			Nine months		
	Yes N = 49	No N = 103	p-value	Yes N = 40	No N = 77	p-value	Yes N = 25	No N = 85	p-value
<b>Demographics</b>									
Male sex	22 (44.9)	64 (62.1)	<b>0.045</b>	19 (47.5)	44 (57.1)	0.321	13 (52.0)	46 (54.1)	0.852
Age	70 (78; 56)	59 (69; 51)	<b>0.001</b>	65 (77.5; 56.5)	57 (68; 51)	<b>0.002</b>	64 (76; 58)	57 (68; 48)	<b>0.010</b>
Return do previous CFS after discharge	20 (40.8)	85 (82.5)	<b>&lt;0.001</b>	18 (45.0)	67 (87.0)	<b>&lt;0.001</b>	15 (60.0)	70 (82.4)	<b>0.019</b>
<b>Comorbid conditions</b>									
Cardiovascular disease	35 (71.4)	57 (55.3)	0.058	28 (70.0)	42 (54.6)	0.106	20 (80.0)	45 (52.9)	<b>0.016</b>
High blood pressure	33 (67.4)	55 (53.4)	0.104	27 (67.5)	41 (53.3)	0.138	20 (80.0)	43 (50.6)	<b>0.009</b>
Heart failure	8 (16.3)	11 (10.7)	0.431	5 (12.5)	8 (10.4)	0.762	4 (16.0)	8 (9.4)	0.464
Ischaemic heart disease	7 (14.3)	8 (7.8)	0.248	3 (7.5)	6 (7.8)	1.000	3 (12.0)	6 (7.1)	0.422
Dyslipidaemia	23 (46.9)	47 (45.6)	0.880	21 (52.5)	32 (41.6)	0.259	14 (56.0)	36 (42.4)	0.228
Cerebrovascular disease	2 (4.1)	8 (7.8)	0.502	2 (5.0)	5 (6.5)	1.000	2 (8.0)	5 (5.9)	0.656
Obesity	21 (43.8)	36 (34.9)	0.299	19 (47.5)	32 (42.1)	0.578	11 (44.0)	36 (42.9)	0.919
Diabetes mellitus	17 (34.7)	33 (32.0)	0.745	13 (32.5)	26 (33.8)	0.890	11 (44.0)	27 (31.8)	0.258
Lung disease	18 (36.7)	22 (21.4)	0.044	12 (30.0)	20 (25.9)	0.643	11 (44.0)	20 (23.5)	<b>0.046</b>
Depression/anxiety	11 (22.5)	19 (18.5)	0.663	11 (27.5)	14 (18.2)	0.243	8 (32.0)	14 (16.5)	0.088
Chronic kidney disease	10 (20.4)	15 (14.6)	0.364	7 (17.5)	9 (11.7)	0.406	5 (20.0)	10 (11.8)	0.325
Osteoarthritis	13 (26.5)	11 (10.7)	<b>0.017</b>	14 (35.0)	4 (5.2)	<b>&lt;0.001</b>	7 (28.0)	8 (9.4)	<b>0.040</b>
Hypothyroidism	4 (8.2)	7 (6.8)	0.747	5 (12.5)	5 (6.5)	0.307	4 (16.0)	5 (5.9)	0.205
Chronic liver disease	7 (14.3)	2 (1.9)	<b>0.005</b>	6 (15.0)	2 (2.6)	<b>0.019</b>	2 (8.0)	6 (7.1)	1.000
Autoimmune disease	4 (8.2)	4 (3.9)	0.272	2 (5.0)	4 (5.2)	1.000	1 (4.0)	5 (5.9)	1.000
Active solid cancer	5 (10.2)	2 (1.9)	0.036	2 (5.0)	2 (2.6)	0.605	1 (4.0)	2 (2.4)	0.542
Active hematologic cancer	3 (6.1)	4 (3.9)	0.682	4 (10.0)	3 (3.9)	0.228	5 (20.0)	2 (2.4)	<b>0.006</b>
HIV	1 (2.0)	1 (0.9)	0.542	1 (2.5)	0	-	1 (4.0)	0	-
<b>Clinical manifestations</b>									
Total number of symptoms at presentation	4 (5; 3)	4 (4; 3)	0.799	3 (4; 3)	4 (5; 3)	0.294	3 (4; 3)	4 (4; 3)	0.761
Fever	32 (65.3)	77 (74.8)	0.227	29 (72.5)	54 (70.1)	0.789	17 (68.0)	61 (71.8)	0.716
Cough	32 (65.3)	67 (65.1)	0.975	26 (65.0)	49 (63.6)	0.884	16 (64.0)	56 (65.9)	0.862
Dyspnoea	34 (69.4)	56 (54.4)	0.078	26 (65.0)	50 (64.9)	0.994	16 (64.0)	55 (64.7)	0.948
Fatigue	24 (48.9)	51 (49.5)	0.951	21 (52.5)	36 (46.8)	0.555	14 (56.0)	41 (48.2)	0.495
Myalgia/arthralgia	22 (44.9)	41 (39.8)	0.551	13 (32.5)	37 (48.1)	0.107	9 (36.0)	38 (44.7)	0.439
Headache	7 (14.3)	20 (19.4)	0.439	5 (12.5)	16 (20.8)	0.268	1 (4.0)	19 (22.4)	<b>0.036</b>

<b>Hospitalization and outcomes</b>									
Time since disease onset and hospital admission (days)	8 (10; 5.5)	8 (10; 5)	0.891	8 (10; 3)	8 (10; 5.5)	0.948	7.5 (10; 3)	8 (10; 5)	0.653
Hospital length of stay (days)	12 (24; 8)	11 (16; 7)	0.084	12 (23; 8)	12 (16; 8)	0.394	13 (23; 9)	12 (17; 8)	0.379
ICU admission	14 (28.6)	22 (21.4)	0.328	10 (25.0)	18 (23.4)	0.845	5 (20.0)	22 (25.9)	0.548
ICU length of stay (days)	12 (19; 7)	6.5 (9; 4)	<b>0.025</b>	15 (19; 6)	8.5 (10; 5)	0.279	19 (19; 10)	7.5 (11; 4)	0.074
High flow nasal cannula	17 (34.7)	24 (23.3)	0.139	12 (30.0)	21 (27.3)	0.756	6 (24.0)	26 (30.6)	0.524
Non-invasive ventilation	4 (8.2)	12 (11.7)	0.585	5 (12.5)	10 (12.9)	1.000	4 (16.0)	10 (11.8)	0.733
Endotracheal intubation	9 (18.4)	9 (8.7)	0.108	5 (12.5)	8 (10.4)	0.762	3 (12.0)	9 (10.6)	1.000
Ventilatory support	22 (44.9)	33 (32.0)	0.123	15 (37.5)	29 (37.7)	0.986	9 (36.0)	33 (38.8)	0.798
Severe disease <sup>a</sup>	22 (44.9)	35 (33.9)	0.194	16 (40.0)	30 (38.9)	0.913	10 (40.0)	34 (40.0)	1.000
WHO ordinal scale	5 (6; 5)	5 (5; 5)	<b>0.027</b>	5 (5; 5)	5 (5; 5)	0.607	5 (5; 5)	5 (5; 5)	0.655
<b>Long-COVID-19</b>									
Persistent symptoms (at least one) at each time point	41 (83.7)	60 (58.3)	<b>0.002</b>	31 (77.5)	42 (54.6)	<b>0.015</b>	16 (64.0)	43 (50.6)	0.237
Fatigue	35 (85.4)	55 (91.7)	0.318	26 (83.9)	38 (90.5)	0.396	11 (68.8)	36 (83.7)	0.204
Cognitive disturbances	2 (4.9)	6 (10.0)	0.468	3 (9.7)	13 (30.9)	<b>0.044</b>	3 (18.8)	6 (13.9)	0.692
Cough/dyspnoea	9 (21.9)	12 (20.0)	0.812	8 (25.8)	7 (16.7)	0.389	4 (25.0)	6 (13.9)	0.436
Muscle weakness	6 (14.6)	3 (5.0)	0.153	3 (9.7)	0	-	1 (6.3)	1 (2.3)	0.472
Taste/olfactory abnormalities	1 (2.4)	3 (5.0)	0.645	1 (3.2)	3 (7.1)	0.632	0	2 (4.7)	-
Pain/discomfort	9 (21.9)	7 (11.7)	0.178	9 (29.0)	7 (16.7)	0.257	3 (18.8)	4 (9.3)	0.375
Palpitations	0	3 (5.9)	-	0	1 (2.4)	-	0	2 (4.7)	-
Other <sup>b</sup>	6 (14.6)	3 (5.0)	0.153	0	2 (4.8)	-	0	1 (2.3)	-
<b>VAS</b>	<b>70 (80; 50)</b>	<b>80 (95; 70)</b>	<b>&lt;0.001</b>	<b>70 (80; 60)</b>	<b>85 (95; 80)</b>	<b>&lt;0.001</b>	<b>70 (77.5; 50)</b>	<b>85 (90; 78)</b>	<b>&lt;0.001</b>

Data are shown as number (%) for categorical variables and median  $\pm$  interquartile range for continuous variables. There are no missing values. <sup>a</sup> Severe disease was defined as ICU admission rate and/or need for any kind of ventilatory support (invasive or non-invasive) during the in-hospital stay. <sup>b</sup> Other included dizziness, postural imbalance, cold extremities/limb paresthesia, wheezing, hair loss. See **Supplementary Data 2** for further detail on comorbid conditions and outcomes' definitions. CFS, clinical frailty scale; ICU, intensive care unit; VAS, Visual Analogue Scale; WHO, World Health Organization.

**Supplementary table 4.** Comparison of clinical and demographic characteristics between patients with and without **self-care** impairment after hospital discharge.

	Three months			Six months			Nine months		
	Yes N = 13	No N = 139	<i>p-value</i>	Yes N = 10	No N = 107	<i>p-value</i>	Yes N = 8	No N = 102	<i>p-value</i>
<b>Demographics</b>									
Male sex	8 (61.5)	78 (56.1)	0.777	5 (50.0)	58 (54.2)	1.000	5 (62.5)	54 (52.9)	0.722
Age	76 (78; 64)	60 (71; 51)	<b>0.004</b>	66 (78; 59)	58 (73; 51)	0.148	60 (73.5; 58.5)	58 (72; 51)	0.224
Return to previous CFS after discharge	3 (23.0)	102 (73.4)	<b>&lt;0.001</b>	3 (30.0)	82 (76.6)	<b>0.004</b>	3 (37.5)	82 (80.4)	<b>0.014</b>
<b>Comorbid conditions</b>									
Cardiovascular disease	10 (76.9)	82 (58.9)	0.248	8 (80.0)	62 (57.9)	0.312	7 (87.5)	58 (56.9)	0.138
High blood pressure	10 (76.9)	78 (56.1)	0.239	8 (80.0)	60 (56.1)	0.189	7 (87.5)	56 (54.9)	0.135
Heart failure	4 (30.8)	15 (10.8)	0.060	2 (20.0)	11 (10.3)	0.307	1 (12.5)	11 (12.8)	1.000
Ischaemic heart disease	2 (15.4)	13 (9.4)	0.619	2 (20.0)	7 (6.5)	0.171	2 (25.0)	7 (6.9)	0.129
Dyslipidaemia	8 (61.5)	62 (44.6)	0.261	4 (40.0)	49 (45.8)	1.000	5 (62.5)	45 (44.1)	0.465
Cerebrovascular disease	1 (7.8)	9 (6.5)	1.000	0	7 (6.5)	-	1 (12.5)	6 (5.9)	0.420
Obesity	7 (53.9)	50 (36.2)	0.240	6 (60.0)	45 (42.5)	0.331	3 (37.5)	44 (43.6)	1.000
Diabetes mellitus	5 (38.5)	45 (32.4)	0.759	6 (60.0)	33 (30.8)	0.082	3 (37.5)	35 (34.3)	1.000
Lung disease	5 (38.5)	35 (25.2)	0.328	4 (40.0)	28 (26.2)	0.458	<b>5 (62.5)</b>	26 (25.5)	<b>0.039</b>
Depression/anxiety	1 (7.7)	29 (20.9)	0.466	3 (30.0)	22 (20.6)	0.443	3 (37.5)	19 (18.6)	0.197
Chronic kidney disease	3 (23.1)	22 (15.8)	0.450	2 (20.0)	14 (13.1)	0.625	1 (12.5)	14 (13.7)	1.000
Osteoarthritis	5 (38.5)	19 (13.7)	<b>0.035</b>	4 (40.0)	14 (13.1)	<b>0.046</b>	4 (50.0)	11 (10.8)	<b>0.012</b>
Hypothyroidism	2 (15.4)	9 (6.5)	0.239	2 (20.0)	8 (7.5)	0.204	1 (12.5)	8 (7.8)	0.507
Chronic liver disease	0 (0.0)	9 (6.5)	-	4 (40.0)	4 (3.7)	<b>0.002</b>	1 (12.5)	7 (6.9)	0.465
Autoimmune disease	1 (7.7)	7 (5.0)	0.520	1 (10.0)	5 (4.7)	0.422	1 (12.5)	5 (4.9)	0.371
Active solid cancer	3 (23.1)	4 (2.9)	<b>0.014</b>	1 (10.0)	3 (2.8)	0.304	1 (12.5)	2 (1.9)	0.204
Active hematologic cancer	2 (15.4)	5 (3.6)	0.111	0	7 (6.5)	-	0	7 (6.9)	-
HIV	1 (7.7)	1 (0.7)	0.164	0	1 (0.9)	-	0	1 (0.9)	-
<b>Clinical manifestations</b>									
Total number of symptoms at presentation	3 (4; 3)	4 (5; 3)	0.386	3 (3; 3)	4 (5; 3)	0.143	3 (3.5; 2)	4 (5; 3)	0.050
Fever	8 (61.5)	101 (72.7)	0.520	5 (50.0)	78 (72.9)	0.152	4 (50.0)	74 (72.6)	0.227
Cough	8 (61.5)	91 (65.5)	0.769	7 (70.0)	68 (63.6)	1.000	5 (62.5)	67 (65.7)	1.000
Dyspnoea	9 (69.2)	81 (58.3)	0.561	7 (70.0)	69 (64.5)	1.000	6 (75.0)	65 (63.7)	0.710
Fatigue	8 (61.5)	67 (48.2)	0.398	5 (50.0)	52 (48.6)	1.000	4 (40.0)	51 (50.0)	1.000
Myalgia /arthralgia	2 (15.4)	61 (43.9)	0.074	2 (20.0)	48 (44.9)	0.185	2 (25.0)	45 (44.1)	0.462
Headache	2 (15.4)	25 (17.9)	1.000	1 (10.0)	20 (18.7)	0.688	0	20 (19.6)	-

<b>Hospitalization and outcomes</b>									
Time since disease onset and hospital admission (days)	6 (10.5; 4)	8 (10; 5)	0.519	9 (10; 4)	8 (10; 5)	0.619	8 (11; 1)	8 (10; 5)	0.821
Hospital length of stay (days)	14 (23; 11)	11 (17; 8)	0.278	12 (14; 7)	12 (17; 8)	0.770	12 (13.5; 9.5)	12 (18; 8)	0.986
ICU admission	2 (15.4)	34 (24.5)	0.734	2 (20.0)	26 (24.3)	1.000	1 (12.5)	26 (25.5)	0.677
ICU length of stay (days)	8.5 (9; 8)	8.5 (13; 5)	0.949	11.5 (19; 4)	9 (13; 6)	1.000	19 (19; 19)	8.5 (13; 5)	0.221
High flow nasal cannula	2 (15.4)	39 (28.1)	0.515	3 (30.0)	30 (28.0)	1.000	1 (12.5)	31 (30.4)	0.433
Non-invasive ventilation	2 (15.4)	14 (10.1)	0.629	2 (20.0)	13 (12.2)	0.615	2 (25.0)	12 (11.8)	0.269
Endotracheal intubation	1 (7.7)	17 (12.2)	1.000	1 (10.0)	12 (11.2)	1.000	1 (12.5)	11 (10.8)	1.000
Ventilatory support	4 (30.8)	51 (36.7)	0.770	4 (40.0)	40 (37.4)	1.000	2 (25.0)	40 (39.2)	0.708
Severe disease <sup>a</sup>	4 (30.8)	53 (38.1)	0.768	4 (40.0)	42 (39.3)	1.000	2 (25.0)	42 (41.2)	0.472
WHO ordinal scale	5 (5; 5)	5 (5; 5)	0.596	5 (5; 5)	5 (5; 5)	0.210	5 (5; 5)	5 (5; 5)	0.225
<b>Long-COVID-19</b>									
Persistent symptoms (at least one) at each time point	8 (61.5)	93 (66.9)	0.762	5 (50.0)	68 (63.6)	0.499	4 (50.0)	55 (53.9)	1.000
Fatigue	8 (100.0)	82 (88.2)	0.593	5 (100.0)	59 (86.8)	1.000	3 (75.0)	44 (80.0)	1.000
Cognitive disturbances	1 (12.5)	7 (7.5)	0.496	0	16 (23.5)	0.579	0	9 (16.4)	-
Cough/dyspnoea	2 (25.0)	19 (20.4)	0.670	3 (60.0)	12 (17.7)	0.056	2 (50.0)	8 (14.6)	0.130
Muscle weakness	1 (12.5)	8 (8.6)	0.539	2 (40.0)	1 (1.5)	<b>0.011</b>	1 (25.0)	1 (1.8)	0.132
Taste/olfactory abnormalities	0 (0.0)	4 (4.3)	-	0	4 (5.9)	-	0	2 (3.6)	-
Pain/discomfort	1 (12.5)	15 (16.1)	1.000	3 (60.0)	13 (19.1)	0.067	1 (25.0)	6 (10.9)	0.405
Palpitations	0 (0.0)	3 (3.2)	-	0	1 (1.5)	-	0	2 (3.6)	-
Other <sup>b</sup>	0 (0.0)	9 (9.7)	-	0	2 (2.9)	-	0	1 (1.9)	-
<b>VAS</b>	50 (60; 45)	80 (90; 70)	<b>&lt;0.001</b>	60 (70; 40)	80 (90; 70)	<b>&lt;0.001</b>	45 (72.5; 30)	82.5 (90; 70)	<b>&lt;0.001</b>

Data are shown as number (%) for categorical variables and median  $\pm$  interquartile range for continuous variables. There are no missing values. <sup>a</sup> Severe disease was defined as ICU admission rate and/or need for any kind of ventilatory support (invasive or non-invasive) during the in-hospital stay. <sup>b</sup> Other included dizziness, postural imbalance, cold extremities/limb paresthesia, wheezing, hair loss. See **Supplementary Data 2** for further detail on comorbid conditions and outcomes' definitions. CFS, clinical frailty scale; ICU, intensive care unit; VAS, Visual Analogue Scale; WHO, World Health Organization.



**Supplementary table 5.** Comparison of clinical and demographic characteristics between patients with and without **usual activities** impairment after hospital discharge.

	Three months			Six months			Nine months		
	Yes N = 51	No N = 101	<i>p-value</i>	Yes N = 37	No N = 80	<i>p-value</i>	Yes N = 18	No N = 92	<i>p-value</i>
<b>Demographics</b>									
Male sex	25 (49.0)	61 (60.4)	0.182	15 (40.5)	48 (60.0)	0.050	9 (50.0)	50 (54.4)	0.799
Age	61 (76; 51)	61 (72; 53)	0.495	59 (77; 54)	58.5 (71.5; 51)	0.172	59 (76; 54)	58 (72; 51)	0.426
Return do previous CFS after discharge	24 (47.1)	81 (80.0)	<b>&lt;0.001</b>	14 (37.8)	71 (88.8)	<b>&lt;0.001</b>	7 (38.9)	78 (84.8)	<b>&lt;0.001</b>
<b>Comorbid conditions</b>									
Cardiovascular disease	34 (66.7)	58 (57.4)	0.271	26 (70.3)	44 (55.0)	0.156	11 (61.1)	54 (58.7)	1.000
High blood pressure	30 (58.8)	58 (57.4)	0.869	25 (67.6)	43 (53.8)	0.159	11 (61.1)	52 (56.5)	0.798
Heart failure	10 (19.6)	9 (8.9)	0.072	5 (13.5)	8 (10.0)	0.546	2 (11.1)	10 (10.9)	1.000
Ischaemic heart disease	7 (13.7)	8 (7.9)	0.264	5 (13.5)	4 (5.0)	0.139	3 (16.7)	6 (6.5)	0.163
Dyslipidaemia	24 (47.1)	46 (45.5)	0.860	19 (51.4)	34 (42.5)	0.427	10 (55.6)	40 (43.5)	0.440
Cerebrovascular disease	2 (3.9)	8 (7.9)	0.497	3 (8.1)	4 (5.0)	0.677	1 (5.6)	6 (6.5)	1.000
Obesity	24 (48.0)	33 (32.7)	0.067	15 (40.5)	36 (45.6)	0.611	6 (33.3)	41 (45.1)	0.440
Diabetes mellitus	16 (31.4)	34 (33.7)	0.777	12 (32.4)	27 (33.8)	0.888	5 (27.8)	33 (35.9)	0.596
Lung disease	17 (33.3)	23 (22.8)	0.163	15 (40.5)	17 (21.3)	<b>0.044</b>	10 (55.6)	21 (22.8)	<b>0.009</b>
Depression/anxiety	11 (21.6)	19 (18.8)	0.687	9 (24.3)	16 (20.0)	0.596	4 (22.2)	18 (19.6)	0.755
Chronic kidney disease	10 (19.6)	15 (14.9)	0.455	6 (16.2)	10 (12.5)	0.575	3 (16.7)	12 (13.0)	0.709
Osteoarthritis	12 (23.5)	12 (11.9)	0.063	10 (27.0)	8 (10.0)	<b>0.026</b>	5 (27.8)	10 (10.9)	0.069
Hypothyroidism	4 (7.8)	7 (6.9)	1.000	6 (16.2)	4 (5.0)	0.071	3 (16.7)	6 (6.5)	0.163
Chronic liver disease	4 (7.8)	5 (4.9)	0.485	5 (13.5)	3 (3.8)	0.107	2 (11.1)	6 (6.5)	0.615
Autoimmune disease	4 (7.8)	4 (3.9)	0.443	3 (8.1)	3 (3.8)	0.379	3 (16.7)	3 (3.3)	0.054
Active solid cancer	6 (11.8)	1 (0.9)	<b>0.006</b>	2 (5.4)	2 (2.5)	0.590	1 (5.6)	2 (2.2)	0.418
Active hematologic cancer	4 (7.8)	3 (2.9)	0.225	4 (10.8)	3 (3.8)	0.205	2 (11.1)	5 (5.4)	0.321
HIV	2 (3.9)	0 (0.0)	-	0	1 (1.3)	-	0	1 (1.1)	-
<b>Clinical manifestations</b>									
Total number of symptoms at presentation	4 (4; 3)	4 (5; 3)	0.601	3 (4; 3)	4 (4.5; 3)	0.755	3 (4; 3)	4 (4.5; 3)	0.460
Fever	34 (66.7)	75 (74.3)	0.327	29 (78.4)	54 (67.5)	0.228	12 (66.7)	66 (71.7)	0.777
Cough	32 (62.8)	67 (66.3)	0.661	23 (62.2)	52 (65.0)	0.766	12 (66.7)	60 (65.2)	1.000
Dyspnoea	36 (70.6)	54 (53.5)	<b>0.043</b>	27 (72.9)	49 (61.3)	0.217	14 (77.8)	57 (61.9)	0.283
Fatigue	20 (39.2)	55 (54.5)	0.076	19 (51.4)	38 (47.5)	0.698	10 (55.6)	45 (48.9)	0.797
Myalgia/arthritis	21 (41.2)	42 (41.6)	0.962	14 (37.8)	36 (45.0)	0.466	6 (33.3)	41 (44.6)	0.443
Headache	7 (13.7)	20 (19.8)	0.355	7 (18.9)	14 (17.5)	0.852	0	20 (21.7)	-

<b>Hospitalization and outcomes</b>									
Time since disease onset and hospital admission (days)	7 (10; 5)	8 (10; 6)	0.262	9 (11; 4.5)	7 (9; 5)	0.119	8 (11; 5)	8 (10; 5)	0.385
Hospital length of stay (days)	12 (26; 7)	11 (16; 8)	0.084	12 (22; 8)	11.5 (16; 8)	0.470	12 (16; 8)	12 (17.5; 8)	0.926
ICU admission	14 (27.5)	22 (21.8)	0.438	9 (24.3)	19 (23.8)	0.946	4 (22.2)	23 (25.0)	1.000
ICU length of stay (days)	12 (19; 8)	6.5 (9; 4)	<b>0.015</b>	13 (19; 7)	8 (11; 5)	0.217	13 (19.5; 5)	9 (13; 5)	0.706
High flow nasal cannula	12 (23.5)	29 (28.7)	0.497	12 (32.4)	21 (26.3)	0.490	5 (27.8)	27 (29.4)	1.000
Non-invasive ventilation	4 (7.8)	12 (11.9)	0.580	6 (16.2)	9 (11.3)	0.554	4 (22.2)	10 (10.9)	0.240
Endotracheal intubation	10 (19.69)	8 (7.9)	0.060	5 (13.5)	8 (10.0)	0.546	2 (11.1)	10 (10.9)	1.000
Ventilatory support	20 (39.2)	35 (34.7)	0.580	16 (43.2)	28 (35.0)	0.392	8 (44.4)	34 (36.9)	0.601
Severe disease <sup>a</sup>	21 (41.2)	36 (35.6)	0.506	17 (45.9)	29 (36.3)	0.318	8 (44.4)	36 (39.1)	0.794
WHO ordinal scale	5 (5; 5)	5 (5; 5)	0.110	5 (5; 5)	5 (5; 5)	0.060	5 (5; 5)	5 (5; 5)	0.487
<b>Long-COVID-19</b>									
Persistent symptoms (at least one) at each time point	42 (82.4)	59 (58.4)	<b>0.003</b>	29 (78.4)	44 (55.0)	<b>0.015</b>	14 (77.8)	45 (48.9)	<b>0.037</b>
Fatigue	39 (92.9)	51 (86.4)	0.308	26 (89.7)	38 (86.4)	0.676	12 (85.7)	35 (77.8)	0.712
Cognitive disturbances	4 (9.5)	4 (6.8)	0.716	8 (27.6)	8 (18.2)	0.394	3 (21.4)	6 (13.3)	0.431
Cough/dyspnoea	8 (10.1)	13 (22.0)	0.715	7 (24.1)	8 (18.2)	0.566	3 (21.4)	7 (15.6)	0.688
Muscle weakness	5 (11.9)	4 (6.8)	0.484	3 (10.3)	0	-	1 (7.1)	1 (2.2)	0.421
Taste/olfactory abnormalities	1 (2.4)	3 (5.1)	0.639	1 (3.5)	3 (6.8)	1.000	0	2 (4.4)	-
Pain/discomfort	6 (14.3)	10 (16.9)	0.788	9 (31.0)	7 (15.9)	0.154	1 (7.1)	6 (13.3)	1.000
Palpitations	1 (2.4)	2 (3.4)	1.000	0	1 (2.3)	-	0	2 (4.4)	-
Other <sup>b</sup>	4 (9.5)	5 (8.5)	1.000	2 (6.9)	0	-	0	1 (2.3)	-
<b>VAS</b>	70 (80; 50)	80 (95; 75)	<b>&lt;0.001</b>	70 (75; 50)	85 (95; 80)	<b>&lt;0.001</b>	70 (75; 50)	85 (90; 75)	<b>&lt;0.001</b>

Data are shown as number (%) for categorical variables and median  $\pm$  interquartile range for continuous variables. There are no missing values. <sup>a</sup> Severe disease was defined as ICU admission rate and/or need for any kind of ventilatory support (invasive or non-invasive) during the in-hospital stay. <sup>b</sup> Other included dizziness, postural imbalance, cold extremities/limb paresthesia, wheezing, hair loss. See **Supplementary Data 1** for further detail on comorbid conditions and outcomes' definitions. CFS, clinical frailty scale; ICU, intensive care unit; VAS, Visual Analogue Scale; WHO, World Health Organization.

**Supplementary table 6.** Comparison of clinical and demographic characteristics between patients with and without **pain/discomfort** impairment after hospital discharge.

	Three months			Six months			Nine months		
	Yes N = 51	No N = 101	<i>p-value</i>	Yes N = 43	No N = 74	<i>p-value</i>	Yes N = 28	No N = 82	<i>p-value</i>
<b>Demographics</b>									
Male sex	24 (47.1)	62 (61.4)	0.092	15 (34.9)	48 (64.9)	<b>0.002</b>	11 (39.3)	48 (58.5)	0.078
Age	63 (75; 55)	59 (73; 51)	0.192	63 (75; 56)	57.5 (73; 51)	<b>0.040</b>	68 (76.5; 58)	56 (67; 50)	<b>0.002</b>
Return to previous CFS after discharge	29 (56.9)	76 (75.3)	<b>0.021</b>	24 (55.8)	61 (82.4)	<b>0.002</b>	12 (42.9)	73 (89.0)	<b>&lt;0.001</b>
<b>Comorbid conditions</b>									
Cardiovascular disease	36 (70.6)	56 (55.5)	0.071	32 (74.4)	38 (51.4)	<b>0.014</b>	19 (67.9)	46 (56.1)	0.275
High blood pressure	34 (66.7)	54 (53.5)	0.120	31 (72.1)	37 (50.0)	<b>0.020</b>	19 (67.9)	44 (53.7)	0.190
Heart failure	5 (9.8)	14 (13.9)	0.607	4 (9.3)	9 (12.2)	0.766	3 (10.7)	9 (10.9)	1.000
Ischaemic heart disease	4 (7.8)	11 (10.9)	0.774	3 (6.9)	6 (8.1)	1.000	2 (7.1)	7 (8.5)	1.000
Dyslipidaemia	29 (56.9)	41 (40.6)	0.057	23 (53.5)	30 (40.5)	0.175	19 (67.9)	31 (37.8)	<b>0.006</b>
Cerebrovascular disease	4 (7.8)	6 (5.9)	0.733	3 (6.9)	4 (5.4)	0.707	3 (10.7)	4 (4.9)	0.368
Obesity	22 (44.0)	35 (34.7)	0.265	21 (50.0)	30 (40.5)	0.324	13 (46.4)	34 (41.9)	0.682
Diabetes mellitus	14 (27.5)	36 (35.6)	0.310	15 (34.9)	24 (32.4)	0.786	11 (39.3)	27 (32.9)	0.541
Lung disease	13 (25.5)	27 (26.7)	0.870	16 (37.2)	16 (21.6)	0.068	8 (28.6)	23 (28.1)	0.958
Depression/anxiety	8 (15.7)	22 (21.8)	0.373	13 (30.2)	12 (16.2)	0.101	9 (32.1)	13 (15.9)	0.098
Chronic kidney disease	6 (11.8)	19 (18.8)	0.268	6 (13.9)	10 (13.5)	1.000	3 (10.7)	12 (14.6)	0.756
Osteoarthritis	12 (23.5)	12 (11.9)	0.063	12 (27.9)	6 (8.1)	<b>0.007</b>	8 (28.6)	7 (8.5)	<b>0.021</b>
Hypothyroidism	1 (1.9)	10 (9.9)	0.100	4 (9.3)	6 (8.1)	1.000	5 (17.9)	4 (4.9)	<b>0.045</b>
Chronic liver disease	6 (11.8)	3 (2.9)	0.061	4 (9.3)	4 (5.4)	0.463	3 (10.7)	5 (6.1)	0.417
Autoimmune disease	4 (7.8)	4 (3.9)	0.443	3 (6.9)	3 (4.1)	0.668	3 (10.7)	3 (3.7)	0.171
Active solid cancer	5 (9.8)	2 (1.9)	<b>0.043</b>	2 (4.7)	2 (2.7)	0.624	0	3 (3.7)	-
Active hematologic cancer	2 (3.9)	5 (4.9)	1.000	2 (4.7)	5 (6.8)	1.000	3 (10.7)	4 (4.9)	0.368
HIV	0 (0.0)	2 (1.9)	-	0	1 (1.4)	-	0	1 (1.2)	-
<b>Clinical manifestations</b>									
Total number of symptoms at presentation	4 (5; 3)	3 (4; 3)	0.054	4 (5; 3)	3.5 (4; 3)	0.826	3 (4; 3)	4 (5; 3)	0.287
Fever	38 (74.5)	71 (70.3)	0.586	34 (70.1)	49 (66.2)	0.140	20 (71.4)	58 (70.7)	0.944
Cough	35 (68.6)	64 (63.4)	0.520	27 (62.8)	48 (64.9)	0.822	19 (67.9)	53 (64.6)	0.757
Dyspnoea	34 (66.7)	56 (55.5)	0.184	27 (62.8)	49 (66.2)	0.708	15 (53.6)	56 (68.3)	0.160
Fatigue	24 (47.1)	51 (50.5)	0.689	22 (51.2)	35 (47.3)	0.687	14 (40.0)	41 (40.0)	1.000
Myalgia /arthralgia	21 (41.2)	42 (41.6)	0.962	18 (41.9)	32 (43.2)	0.994	12 (42.9)	35 (42.7)	0.987
Headache	9 (17.7)	18 (17.8)	0.979	8 (18.6)	13 (17.6)	0.888	5 (17.9)	15 (18.3)	0.959

<b>Hospitalization and outcomes</b>									
Time since disease onset and hospital admission (days)	9 (10; 7)	7 (9; 4)	<b>0.021</b>	8 (10; 4)	7 (10; 5)	0.632	9 (10; 5)	8 (10; 5)	0.330
Hospital length of stay (days)	12 (22; 7)	12 (17; 8)	0.918	12 (20; 8)	12 (16; 8)	0.764	12 (21.5; 8)	12 (16; 8)	0.888
ICU admission	11 (21.6)	25 (24.8)	0.663	13 (30.2)	15 (20.3)	0.223	6 (21.4)	21 (25.6)	0.657
ICU length of stay (days)	8 (13; 6)	9 (13; 4)	0.654	13 (19; 9)	6 (9; 4)	<b>0.009</b>	16 (19; 13)	7 (9; 5)	<b>0.035</b>
High flow nasal cannula	14 (27.5)	27 (26.7)	0.925	11 (25.6)	22 (29.7)	0.631	6 (21.4)	26 (31.7)	0.301
Non-invasive ventilation	6 (11.8)	10 (9.9)	0.782	6 (13.9)	9 (12.2)	0.781	3 (10.7)	11 (13.4)	1.000
Endotracheal intubation	5 (9.8)	13 (12.9)	0.791	7 (16.3)	6 (8.1)	0.225	4 (14.3)	8 (9.8)	0.497
Ventilatory support	21 (41.2)	34 (33.7)	0.363	16 (37.2)	28 (37.8)	0.946	9 (32.1)	33 (40.2)	0.446
Severe disease <sup>a</sup>	21 (41.2)	36 (35.6)	0.506	17 (39.5)	29 (39.2)	0.971			
WHO ordinal scale	5 (5; 5)	5 (5; 5)	0.131						
<b>Long-COVID-19</b>									
Persistent symptoms (at least one) at each time point	42 (82.4)	59 (58.4)	<b>0.003</b>	36 (83.7)	37 (50.0)	<b>&lt;0.001</b>	22 (78.6)	37 (45.1)	<b>0.002</b>
Fatigue	38 (90.5)	52 (88.1)	0.710	31 (86.1)	33 (89.2)	0.689	16 (72.7)	31 (83.8)	0.308
Cognitive disturbances	2 (4.8)	6 (10.2)	0.464	8 (22.2)	8 (21.6)	1.000	3 (13.6)	6 (16.2)	1.000
Cough/dyspnoea	7 (16.8)	14 (23.7)	0.389	5 (13.9)	10 (27.0)	0.247	3 (13.6)	7 (18.9)	0.729
Muscle weakness	6 (14.3)	3 (5.1)	0.158	3 (8.3)	0	-	2 (9.1)	0	-
Taste/olfactory abnormalities	2 (4.8)	2 (3.4)	1.000	1 (2.8)	3 (8.1)	0.615	0	2 (5.4)	-
Pain/discomfort	14 (33.3)	2 (3.4)	<b>&lt;0.001</b>	14 (38.9)	2 (5.4)	<b>0.001</b>	6 (27.3)	1 (2.7)	<b>0.009</b>
Palpitations	1 (2.4)	2 (3.4)	1.000	0	1 (2.7)	-	1 (4.6)	1 (2.7)	1.000
Other <sup>b</sup>	3 (7.1)	6 (10.2)	0.732	2 (5.6)	0	-	1 (4.8)	0	-
<b>VAS</b>	<b>75 (80; 50)</b>	<b>80 (90; 70)</b>	<b>0.002</b>	<b>70 (80; 60)</b>	<b>85 (95; 75)</b>	<b>&lt;0.001</b>	<b>71.5 (85; 60)</b>	<b>82.5 (90; 75)</b>	<b>0.005</b>

Data are shown as number (%) for categorical variables and median  $\pm$  interquartile range for continuous variables. There are no missing values. <sup>a</sup> Severe disease was defined as ICU admission rate and/or need for any kind of ventilatory support (invasive or non-invasive) during the in-hospital stay. <sup>b</sup> Other included dizziness, postural imbalance, cold extremities/limb paresthesia, wheezing, hair loss. See **Supplementary Data 2** for further detail on comorbid conditions and outcomes' definitions. CFS, clinical frailty scale; ICU, intensive care unit; VAS, Visual Analogue Scale; WHO, World Health Organization.

**Supplementary table 7.** Comparison of clinical and demographic characteristics between patients with and without **anxiety/depression** impairment after hospital discharge.

	Three months			Six months			Nine months		
	Yes N = 52	No N = 100	<i>p-value</i>	Yes N = 46	No N = 71	<i>p-value</i>	Yes N = 34	No N = 76	<i>p-value</i>
<b>Demographics</b>									
Male sex	22 (42.3)	64 (64.0)	<b>0.010</b>	17 (36.9)	46 (64.8)	<b>0.003</b>	15 (44.1)	44 (57.9)	0.181
Age	58 (72.5; 52)	61 (73.5; 52)	0.863	59.5 (76; 51)	58 (71; 51)	0.456	59.5 (75; 56)	57 (70; 50.5)	0.887
Return do previous CFS after discharge	27 (51.9)	78 (78.0)	<b>0.001</b>	35 (76.1)	50 (70.4)	0.502	21 (61.8)	64 (84.2)	<b>0.009</b>
<b>Comorbid conditions</b>									
Cardiovascular disease	28 (53.9)	64 (64.0)	0.224	27 (58.7)	43 (60.6)	0.840	21 (61.8)	44 (57.9)	0.703
High blood pressure	26 (50.0)	62 (62.0)	0.155	25 (54.4)	43 (60.6)	0.506	20 (58.8)	43 (56.6)	0.826
Heart failure	2 (3.9)	<b>17 (17.0)</b>	<b>0.020</b>	6 (13.0)	7 (9.9)	0.764	2 (5.9)	10 (13.2)	0.336
Ischaemic heart disease	3 (5.8)	12 (12.0)	0.265	6 (13.0)	3 (4.2)	0.152	4 (11.8)	5 (6.6)	0.454
Dyslipidaemia	26 (50.0)	44 (44.0)	0.481	23 (50.0)	30 (42.3)	0.411	18 (52.9)	32 (42.1)	0.292
Cerebrovascular disease	2 (3.9)	8 (8.0)	0.495	2 (4.4)	5 (7.0)	0.703	3 (8.8)	4 (5.3)	0.674
Obesity	20 (38.5)	37 (37.4)	0.896	17 (36.9)	34 (48.6)	0.218	14 (41.2)	33 (44.0)	0.783
Diabetes mellitus	13 (25.0)	37 (37.0)	0.135	17 (36.9)	22 (30.9)	0.503	10 (29.4)	28 (36.8)	0.449
Lung disease	16 (30.8)	24 (24.0)	0.369	13 (28.3)	19 (26.8)	0.859	14 (41.2)	17 (22.4)	<b>0.043</b>
Depression/anxiety	11 (21.2)	19 (19.0)	0.752	14 (30.4)	11 (15.5)	0.054	12 (35.3)	10 (13.2)	<b>0.007</b>
Chronic kidney disease	5 (9.6)	20 (20.0)	0.101	9 (19.6)	7 (9.9)	0.171	2 (5.9)	13 (17.1)	0.141
Osteoarthritis	9 (17.3)	15 (15.0)	0.711	9 (19.6)	9 (12.7)	0.432	8 (23.5)	7 (9.2)	0.068
Hypothyroidism	3 (5.8)	8 (8.0)	0.750	4 (8.7)	6 (8.5)	1.000	5 (14.7)	4 (5.3)	0.132
Chronic liver disease	4 (7.7)	5 (5.0)	0.493	4 (8.7)	4 (5.6)	0.710	2 (5.9)	6 (7.9)	1.000
Autoimmune disease	3 (5.8)	5 (5.0)	1.000	4 (8.7)	2 (2.8)	0.210	3 (8.8)	3 (3.9)	0.371
Active solid cancer	2 (3.9)	5 (5.0)	1.000	2 (4.4)	2 (2.8)	0.645	1 (2.9)	2 (2.6)	1.000
Active hematologic cancer	2 (3.9)	5 (5.0)	1.000	2 (4.4)	5 (7.0)	0.703	2 (5.9)	5 (6.6)	1.000
HIV	1 (1.9)	1 (1.0)	1.000	0	1 (1.4)	-	0	1 (1.3)	-
<b>Clinical manifestations</b>									
Total number of symptoms at presentation	4 (5; 3)	3 (4; 3)	<b>0.039</b>	4 (5; 3)	3 (4; 3)	0.064	3 (4; 3)	4 (5; 3)	0.367
Fever	40 (76.9)	69 (69.0)	0.304	32 (69.6)	51 (71.8)	0.792	25 (73.5)	53 (69.7)	0.686
Cough	35 (67.3)	64 (64.0)	0.685	31 (67.4)	44 (61.9)	0.551	20 (58.8)	52 (68.4)	0.328
Dyspnoea	33 (63.5)	57 (57.0)	0.442	30 (65.2)	46 (64.8)	0.962	22 (64.7)	49 (64.5)	0.981
Fatigue	32 (61.5)	43 (43.0)	<b>0.030</b>	24 (52.2)	33 (46.5)	0.547	17 (50.0)	38 (50.0)	1.000
Myalgia/arthritis	25 (48.1)	38 (38.0)	0.232	24 (52.2)	26 (36.6)	0.097	16 (47.1)	31 (40.8)	0.539
Headache	8 (15.4)	19 (19.0)	0.580	12 (26.1)	9 (12.7)	0.065	6 (17.7)	14 (18.4)	0.923

<b>Hospitalization and outcomes</b>									
Time since disease onset and hospital admission (days)	9 (11; 7)	7 (10; 4)	<b>0.010</b>	8 (10; 5.5)	7 (10; 4)	0.601	8 (10; 3)	8 (10; 5)	0.887
Hospital length of stay (days)	12 (23.5; 8)	11 (16.5; 7.5)	0.293	12 (18; 8)	12 (17; 8)	0.810	12 (22; 8)	11 (17; 8)	0.378
ICU admission	14 (26.9)	22 (22.0)	0.498	5 (10.9)	23 (32.4)	<b>0.008</b>	7 (20.6)	20 (26.3)	0.519
ICU length of stay (days)	8.5 (19; 7)	8 (13; 4)	0.268	9 (13; 4)	9 (13; 6)	0.763	9 (13; 5)	8 (13; 5)	0.978
High flow nasal cannula	16 (30.8)	25 (25.0)	0.447	12 (26.1)	21 (29.6)	0.682	12 (35.3)	20 (26.3)	0.338
Non-invasive ventilation	9 (17.3)	7 (7.0)	0.091	3 (6.5)	12 (16.9)	0.156	5 (14.7)	9 (11.8)	0.759
Endotracheal intubation	7 (13.5)	11 (11.0)	0.792	3 (6.5)	10 (14.1)	0.243	5 (14.7)	7 (9.2)	0.509
Ventilatory support	24 (46.2)	31 (31.0)	0.065	15 (32.6)	29 (40.9)	0.369	16 (47.1)	26 (34.2)	0.200
Severe disease <sup>a</sup>	25 (48.1)	32 (32.0)	0.052	16 (34.8)	30 (42.3)	0.419	16 (47.1)	28 (36.8)	0.312
WHO ordinal scale	5 (5; 5)	5 (5; 5)	0.241						
<b>Long-COVID-19</b>									
Persistent symptoms at three months	42 (80.8)	59 (59.0)	<b>0.007</b>	32 (69.6)	41 (57.8)	0.197	24 (70.6)	35 (46.1)	<b>0.017</b>
Fatigue	39 (92.9)	51 (86.4)	0.308	28 (87.5)	36 (87.8)	0.969	20 (83.3)	27 (77.1)	0.562
Cognitive disturbances	3 (7.1)	5 (8.5)	1.000	7 (21.9)	9 (21.9)	1.000	5 (20.8)	4 (11.4)	0.464
Cough/dyspnoea	11 (26.2)	10 (16.9)	0.259	6 (18.8)	9 (21.9)	0.779	4 (16.7)	6 (17.1)	1.000
Muscle weakness	5 (11.9)	4 (6.8)	0.484	2 (6.3)	1 (2.4)	0.578	2 (8.3)	0	-
Taste/olfactory abnormalities	3 (7.1)	1 (1.7)	0.305	4 (12.5)	0	-	2 (8.3)	0	-
Pain/discomfort	7 (16.7)	9 (15.3)	1.000	6 (18.8)	10 (24.4)	0.776	1 (4.2)	6 (17.1)	0.223
Palpitations	1 (2.4)	2 (3.4)	1.000	1 (3.1)	0	-	0	2 (5.7)	-
Other <sup>b</sup>	6 (14.3)	3 (5.1)	0.158	2 (6.3)	0	-	1 (4.2)	0	-
<b>VAS</b>	70 (80; 51)	85 (95; 70)	<b>&lt;0.001</b>	75 (80; 60)	80 (90; 70)	0.006	79 (85; 60)	85 (90; 75)	<b>0.003</b>

Data are shown as number (%) for categorical variables and median  $\pm$  interquartile range for continuous variables. There are no missing values. <sup>a</sup> Severe disease was defined as ICU admission rate and/or need for any kind of ventilatory support (invasive or non-invasive) during the in-hospital stay. <sup>b</sup> Other included dizziness, postural imbalance, cold extremities/limb paresthesia, wheezing, hair loss. See **Supplementary Data 2** for further detail on comorbid conditions and outcomes' definitions. CFS, clinical frailty scale; ICU, intensive care unit; VAS, Visual Analogue Scale; WHO, World Health Organization.

**Supplementary table 8.** Univariate estimated regression coefficients (with respective 95% confident intervals) and standard errors based on mixed-effects model with linear trends for the EQ-5D-3L index.

Effect	Estimate (95% CI)	SE	Z-score	p-value
Long-COVID-19 at three months	- 0.14 (- 0.19 – - 0.09)	0.03	- 5.53	<b>&lt;0.001</b>
Time-point assessment	- 0.004 (- 0.005 – 0.01)	0.005	0.91	0.364

SE, standard error; CI, confidence interval; Z, z-statistic.

**Supplementary table 9.** Multivariate estimated regression coefficients (with respective 95% confident intervals) and standard errors based on mixed-effects model with linear trends for the EQ-5D-3L index.

Effect	Estimate (95% CI)	SE	Z-score	p-value
Long-COVID-19 at three months	- 0.10 (- 0.15 – - 0.05)	0.03	-4.00	<b>&lt;0.001</b>
Time-point assessment	- 0.004 (- 0.005 – 0.01)	0.005	0.91	0.364
Male sex	0.06 (0.01 – 0.10)	0.02	2.56	<b>0.011</b>
Age	-0.002 (- 0.003 – 0.0004)	0.001	- 1.58	0.115
CFS	- 0.02 (-0.05 – 0.003)	0.01	- 1.75	0.080
Return do previous CFS (first assessment)	0.10 (0.05 – 0.15)	0.03	3.71	<b>&lt;0.001</b>
Lung disease	- 0.09 (- 0.14 – - 0.04)	0.03	- 3.51	<b>&lt;0.001</b>
Osteoarthritis	- 0.12 (- 0.19 – - 0.06)	0.07	- 3.70	<b>&lt;0.001</b>

CFS, clinical frailty scale; SE, standard error; CI, confidence interval; Z, z-statistic.